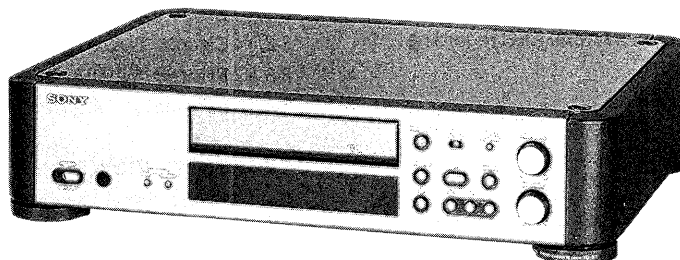


TC-S7

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model*



Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	TCM-200V30

SPECIFICATIONS

Recording system 4-track 2-channel stereo

Fast-forward and rewind time

Approx. 90 sec. (with C-60 cassette)

Bias AC Bias

Signal-to-noise ratio (NAB, at peak level)

Cassette	Dolby NR switch		
	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METAL-ES)	60 dB	69 dB	75 dB
TYPE II (Sony UX-S)	59 dB	68 dB	74 dB
TYPE I (Sony HF-S)	57 dB	66 dB	72 dB

Total harmonic distortion

1.0% (with Sony METAL-ES cassettes)

Frequency response (DOLBY NR OFF)

TYPE IV cassette (Sony METAL-ES)	20 – 20,000 Hz (± 3 dB, IEC) 20 – 16,000 Hz (± 3 dB, 0 VU (–4 dB) recording)
TYPE II cassette (Sony UX-S)	20 – 18,000 Hz (± 3 dB, IEC)
TYPE I cassette (Sony HF-S)	20 – 17,000 Hz (± 3 dB, IEC)

Wow and flutter ± 0.09 % W.Peak (IEC)

0.05 % WRMS (NAB)

± 0.14 % W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	77.5 mV
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.32 V at a load impedance 47 k ohms
	Load impedance	Over 10 k ohms

General

Power requirements

Model for Continental Europe

220 – 230 V AC, 50/60 Hz

Model for the United Kingdom

240 V AC, 50/60 Hz

— Continued on page 2 —

STEREO CASSETTE DECK
SONY®

Power consumption 17 watts

Dimensions Approx. 430 × 95 × 360 mm
(17 × 3³/₄ × 14¹/₄ inches) (w/h/d)
including projecting parts and controls

Weight Approx. 5.8 kg (12 lb 13 oz)

Supplied accessory

Audio connecting cord (2)

Design and specifications subject to change without notice.

Note



This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

- Flexible Circuit Board Repairing**
- Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.
- Notes on chip component replacement**
- Never reuse a disconnected chip component.
 - Notice that the minus side of a tantalum capacitor may be damaged by heat.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	GENERAL	3
2.	ADJUSTMENTS.....	4
3.	DIAGRAMS	
3-1.	Block Diagram	10
3-2.	Circuit Boards Location.....	12
3-3.	Printed Wiring Boards.....	16
3-4.	Schematic Diagram	19
4.	EXPLODED VIEWS	
4-1.	Front Panel Section	25
4-2.	Rear Panel Section.....	26
4-3.	Mechanism Section (1)	27
4-4.	Mechanism Section (2)	28
4-5.	Mechanism Section (3)	29
5.	ELECTRICAL PARTS LIST	30

SAFETY-RELATED COMPONENT WARNING!!

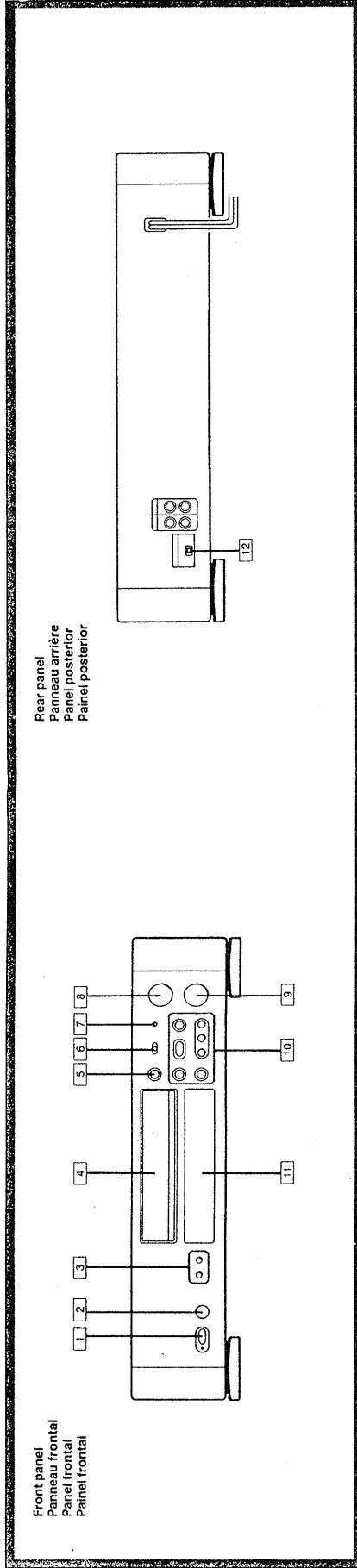
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Location of Controls

Emplacement des commandes

Ubicación de los controles

Localização dos controles



Refer to the pages indicated in ● for details.

Consulter les pages indiquées dans un cercle noir ● pour plus de détails.

Con respecto a los detalles, consulte las páginas indicadas en ●.

Consulte páginas indicadas nos círculos ● para maiores detalhes.

Cassette deck

- 1 POWER switch and indicator
- 2 Remote sensor
- 3 COUNTER buttons
MEMORY button ●
RESET button ●
- 4 Cassette tray
- 5 OPEN/CLOSE button ●
- 6 DOLBY NR switch ●, ●
- 7 MONITOR button ●
- 8 REC LEVEL control ●, ●
- 9 BALANCE control ●
- 10 Tape operating buttons
▶▶ (AMS): Fast forward and AMS* button ●, ●
◀◀ (AMS): Rewind and AMS* button ●, ●
- 11 Play button ●
- 12 Stop button ●, ●
- 13 Pause button ●, ●
- 14 Record button ●
- 15 Record-muting button ●
- 16 Display window
- 17 MPX FILTER switch ●

*AMS is the abbreviation of Automatic Music Sensor.

Platine à cassette

- 1 Interrupteur d'alimentation et témoin POWER
- 2 Capteur de télécommande
- 3 Toggles du compteur COUNTER
Touche de mémorisation (MEMORY) ●
Touche de réinitialisation (RESET) ●
- 4 Plateau à cassette
- 5 Touche d'ouverture/fermeture (▲ OPEN/CLOSE) ●
- 6 Interrupteur de réduction de bruit Dolby (DOLBY NR) ●, ●
- 7 Touche de surveillance (MONITOR) ●
- 8 Réglage de niveau d'enregistrement (REC LEVEL) ●, ●
- 9 Réglage de balance (BALANCE) ●
- 10 Touche d'exploitation de la platine à cassette
▶▶ (AMS): Touche d'avance rapide et AMS* ●, ●
◀◀ (AMS): Touche de rebroussement et AMS* ●, ●, ●
- 11 Touche de lecture ●
- 12 Touche d'arrêt ●, ●
- 13 Touche de pause ●, ●
- 14 Touche d'enregistrement ●
- 15 Touche d'enregistrement/silencieux ●
- 16 Fenêtre d'affichage
- 17 Commutateur MPX FILTER ●

*AMS est l'abréviation de capteur automatique de musique.

Deck de cassettes

- 1 Interrupteur de alimentación (POWER) e indicador
- 2 Sensor de control remoto
- 3 Teclas del contador (COUNTER)
Tecla de memorización (MEMORY) ●
Tecla de puesta a cero (RESET) ●
- 4 Bandeja del cassette
- 5 Tecla de apertura/cierre (▲ OPEN/CLOSE) ●
- 6 Selector de reducción de ruido Dolby (DOLBY NR) ●, ●
- 7 Tecla selectora de escucha (MONITOR) ●
- 8 Control de nivel de grabación (REC LEVEL) ●, ●
- 9 Control de equilibrio (BALANCE) ●
- 10 Tecla de operación de la cinta
▶▶ (AMS): Tecla de avance rápido y del AMS* ●, ●
◀◀ (AMS): Tecla de rebobinado y del AMS* ●, ●, ●
- 11 Tecla de reproducción ●
- 12 Tecla de parada ●, ●
- 13 Tecla de pausa ●, ●
- 14 Tecla de grabación ●
- 15 Tecla de silenciamiento de la grabación ●
- 16 Ventanilla visualizadora
- 17 Interruptor del filtro multiplex (MPX FILTER) ●

*AMS es la abreviatura de Automatic Music Sensor: Sensor automático de canciones.

Gravador cassette

- 1 Interruptor e indicador POWER de alimentação
- 2 Sensor remoto
- 3 Tecla MEMORY da memória
Tecla RESET de reinício ●
- 4 Compartimento de cassetes
- 5 Tecla ▲ OPEN/CLOSE de abertura/fechamento ●
- 6 Interruptor DOLBY NR de redução de ruído ●, ●
- 7 Tecla MONITOR de monitorização ●
- 8 Controle REC LEVEL do nível da gravação ●, ●
- 9 Controle BALANCE de balanço ●
- 10 Teclas de controle da cassette
▶▶ (AMS): avanço rápido e busca automática AMS* ●, ●
◀◀ (AMS): rebobinagem e busca automática AMS* ●, ●, ●
- 11 leitura ●
- 12 paragem ●, ●
- 13 pausa ●, ●
- 14 gravação ●
- 15 silenciamento da gravação ●
- 16 Mostrador
- 17 Interruptor MPX FILTER do filtro multiplex ●

*AMS é abreviação de Sensor Automático de Música.

SECTION 1 GENERAL

This section is extracted from instruction manual.

SECTION 2 ADJUSTMENTS

1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :

record/playback head	pinch roller
erase head	rubber belts
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustment
4. After the adjustments, apply suitable locking compound to the parts adjusted.

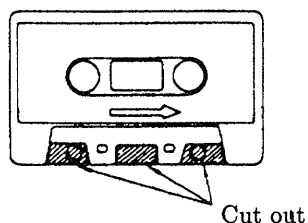
Tape Path Adjustment

Note : When using the adjustment methods for other than replacement reasons, please do not tamper unnecessarily with the adjustment screws or the erasehead because the record/playback head will be made the standard tape paths. Moreover, when it is necessary to adjust and replace two or more of any of the heads one, completely taking out the first tape path, and then replacing the second one.

Preparation :

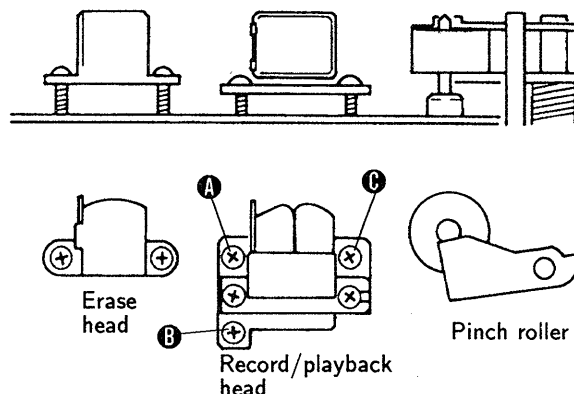
1. Mirror cassette CQ009C 8-909-708-01
(or CQ012C 8-909-708-02)

If one does not have this, cut out the sections of a 120-minute cassette shell as indicated below and use that cassette.

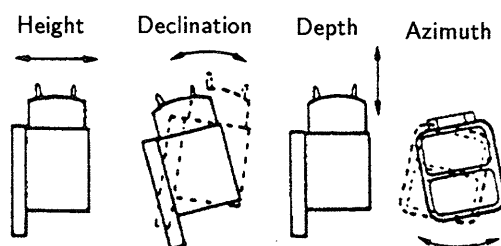


2. Phillips screwdriver (medium-size) :
For the head adjustment screws
3. Pen light
4. WS-48B (3kHz, 0dB)
5. P-4-A100 (10kHz, -10dB)

Adjustment Position : As seen from the cassette, side (top) and MD as seen head on (bottom).



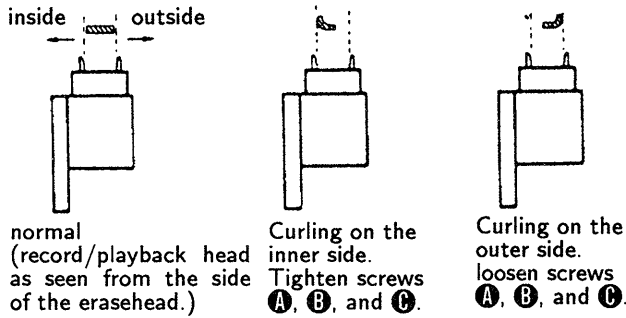
Definition of Terms : The figures are of a record/playback head.



Record/playback head

Note : Only perform this adjustment when the record/playback head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Height Adjustment)** Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws **A**, **B**, and **C**, respectively by the same angle, moving the head so that it remains at the same angle throughout the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally ; but loosen them if the tape begins to curl on the top side (outer side).



3. **(Declination Adjustment)** While in the record/playback position, set the back tension to 0 (wind the supply reel with something thin like a pencil counterclockwise direction) and make sure there is no curling or shifting (shifting up/shifting down) at the guide of the record/playback head. Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked.

When there is a shift, tighten screws **B** and **C** equally and change the declination of the head. If it is shifting down, loosen them.

4. Repeat the adjustments in steps 2 and 3 and fine adjust the height and the declination.

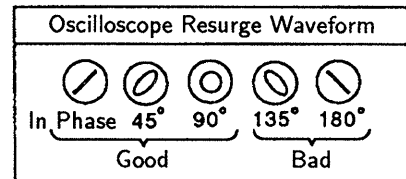
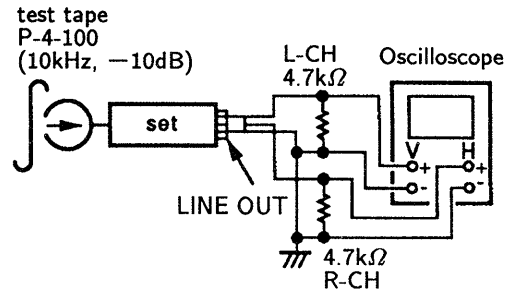
5. **(Preliminary Azimuth Adjustment)**

After demagnetizing and cleaning the adjustment head, play back WS-48B (3kHz, 0dB).

Turn screw **C** so that the reading on the level meter of the unit or that of the level meter connected to LINE OUT is maximized.

If the screw is turned at least half a revolution, repeat the adjustment from step 1.

6. **(Tape Path Check)** Connect the oscilloscope to LINE OUT and play back P-4-A100 (10kHz, -10dB) to display a resurge waveform. After 20 seconds of record/playback (after the tension within the loop has been increased sufficiently), make sure the variation in the resurge is within ± 90 degrees (within ± 45 degrees is desired). If the variation is greater than this, it is because the declination and/or the height adjustments from step 1.



TORQUE MEASUREMENT

Torque	Torque meter	Meter reading
FWD	CQ-102C	28 - 60g.cm (0.39 - 0.83oz. inch)
FWD Back tension	CQ-102C	1 - 5g.cm (0.014 - 0.069oz. inch)
FF, REW	CQ-201B	65 - 90g.cm (0.9 - 1.25oz. inch)

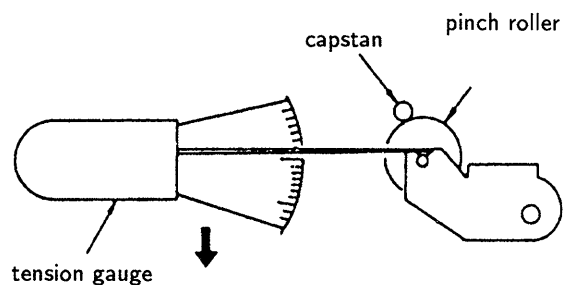
Pinch Roller Pressing Force Measurement

Mode : playback

Hook needle of the tension gauge to the pinch roller shaft and push back pinch roller to detach it from capstan. Then, return it gradually to capstan and read the gauge when the pinch roller begins turning.

Standard Limits :

210 - 320g (7.4 - 11.3oz)



2. ELECTRICAL ADJUSTMENT

Note : The adjustment should be performed in the order given in the service manual. As a rule, adjustments about playback should be performed before those about recording.

The adjustment should be performed before for both L-CH and R-CH.

Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF

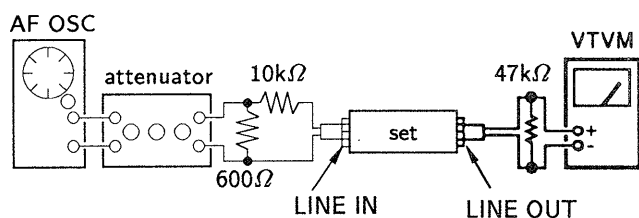
MPX FILTER switch : OFF

TAPE/SOURCE switch : Tape

Standard Record :

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

— Record Mode —



Standard Input Level

input terminal	LINE IN
source impedance	10k Ω
input level	0.25V (−10dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47k Ω
output level	0.35V (−7.7dB)

Test Tape

Type	Signal	Used for
P-4-A100	10kHz, -0dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

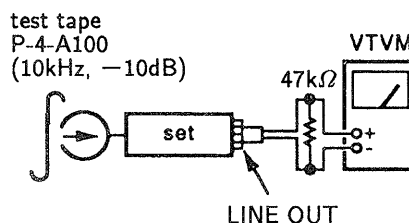
Test Mode

This set will get into test mode by shortung the pins of TP803 on Audio system control board before turning the power on.

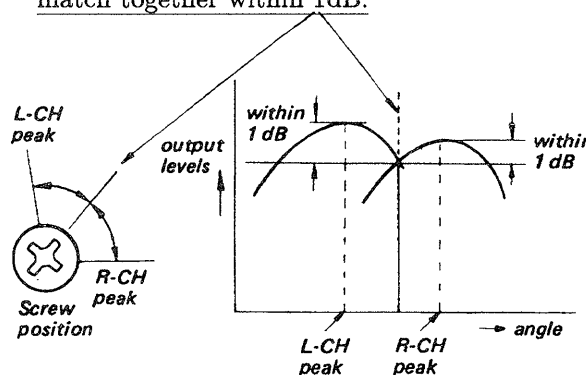
Record/Playback Head Azimuth Adjustment

Porcedure :

1. Mode : FWD playback

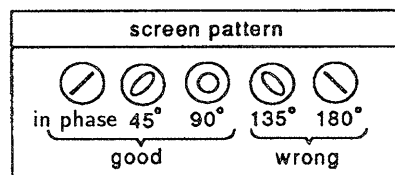
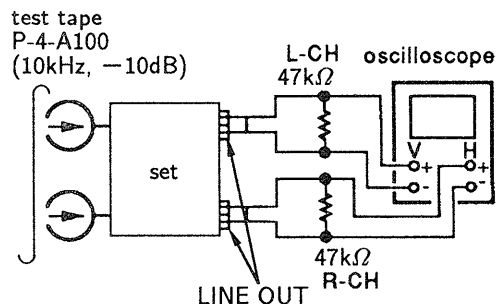


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both output levels match together within 1dB.



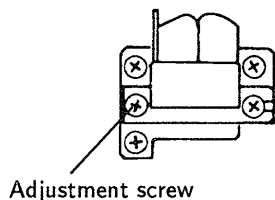
3. Phase Check

Mode : playback



4. After the adjustment, lock the screws with locking compound.

Adjustment Location : Record/Playback head



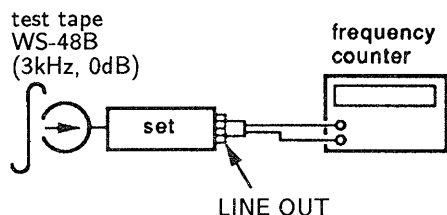
Tape Speed Adjustment

Setting :

Test pin TP803 short

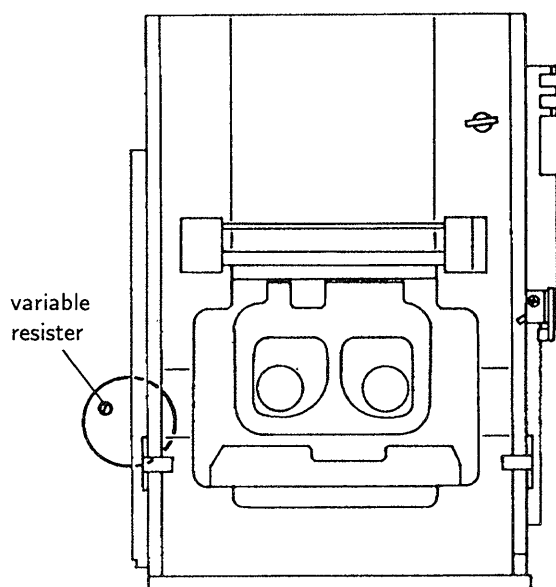
Procedure :

Mode : playback



1. Set to playback mode.
2. Adjust motor rear side (variable resister) so that the frequency counter reading becomes $3,000 \pm 15\text{Hz}$.

Adjustment Location : motor rear side.

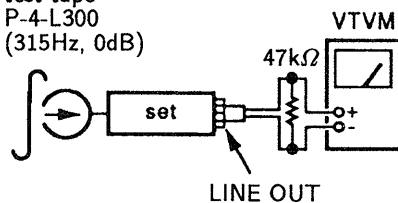


Playback Level Adjustment

Procedure :

Mode : playback

test tape
P-4-L300
(315Hz, 0dB)



Adjust RV121 (L-ch) and RV221 (R-ch) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits :

LINE OUT level : $-7.7 \pm 0.5\text{dB}$ (0.33 - 0.37V)

Level difference between channels : less than 0.5dB.

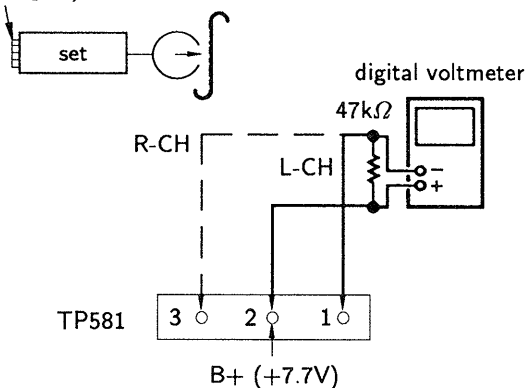
Check that the LINE OUT level does not change even if Playback and Stop operation is repeated several times.

Adjustment Location : Audio system control board

Bias Consumption current Adjustment

Procedure :

LINE IN
(no signal) CS-413 blank tape



1. Set RV181 and RV281 to mechanical center and turn the set recording mode.
2. Connect digital voltmeter as shown by the following table.
3. Adjust the following transformers for the minimum readings on the digital voltmeter.

	Mesurement Point	Adjustment Part	Value
L-ch	① and ②, TP581	T181	not more than 200mV
R-ch	③ and ②, TP581	T281	

Adjustment Location : Audio system control board

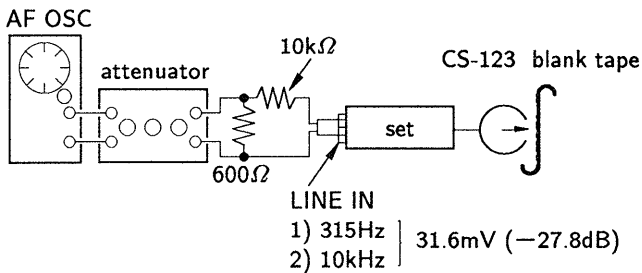
Record Bias Adjustment

Setting :

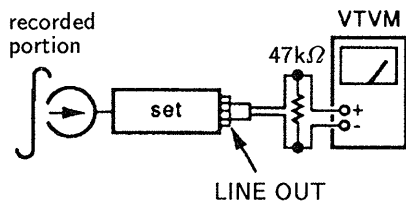
REC LEVEL control : Standard Record (see page).
test pin TP803 : short

Procedure :

1. Mode : record



1. Mode : playback



Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is 0 ± 0.5 dB relative to the 315Hz output. If necessary, adjust RV181 (L-ch) and RV281 (R-ch) for repeat the steps given above.

Adjustment Location : Audio system control board

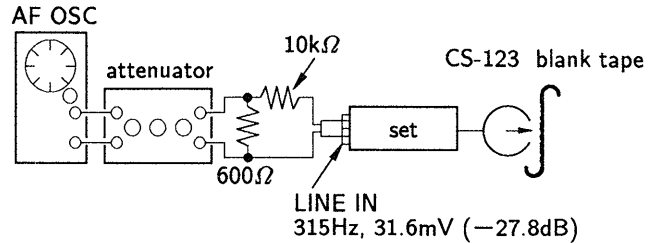
Record Level Adjustment

Setting :

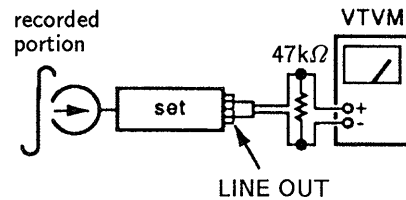
REC LEVEL control : Standard Record (see page)
test pin TP803 : short

Procedure :

1. Mode : record



2. Mode : playback



3. Playback the signal recorded in step 1.

Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV 141 (L-ch) and RV241 (R-ch) repeat the step 1 2.

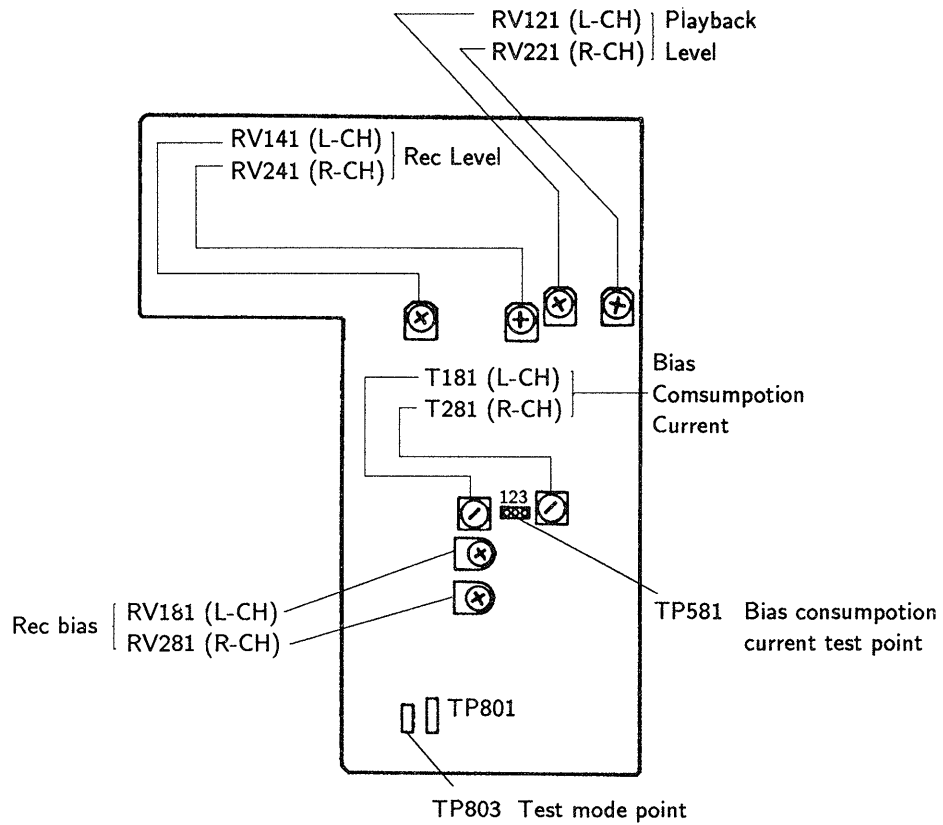
Adjustment Limits :

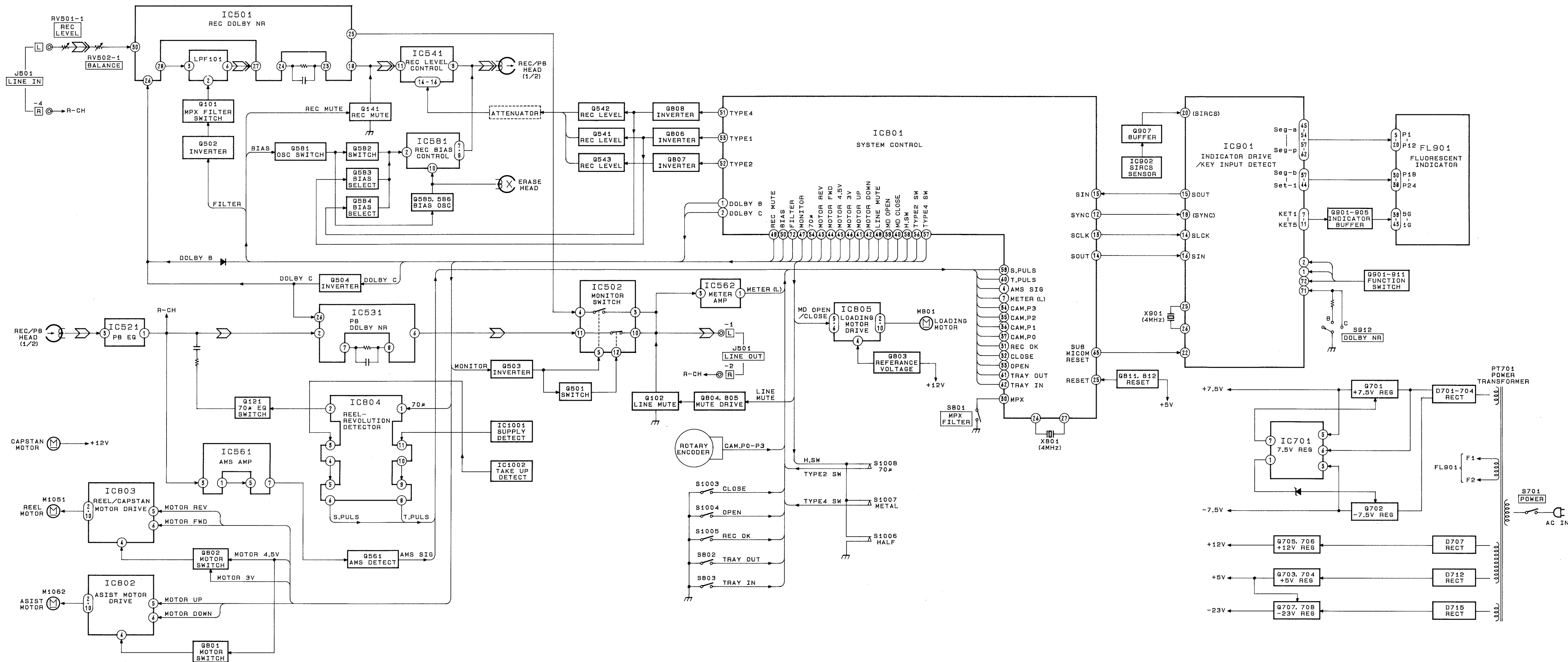
$-27.8\text{dB} \pm 0.5\text{dB}$ (29 to 33.4mV)

Adjustment Location : Audio system control board

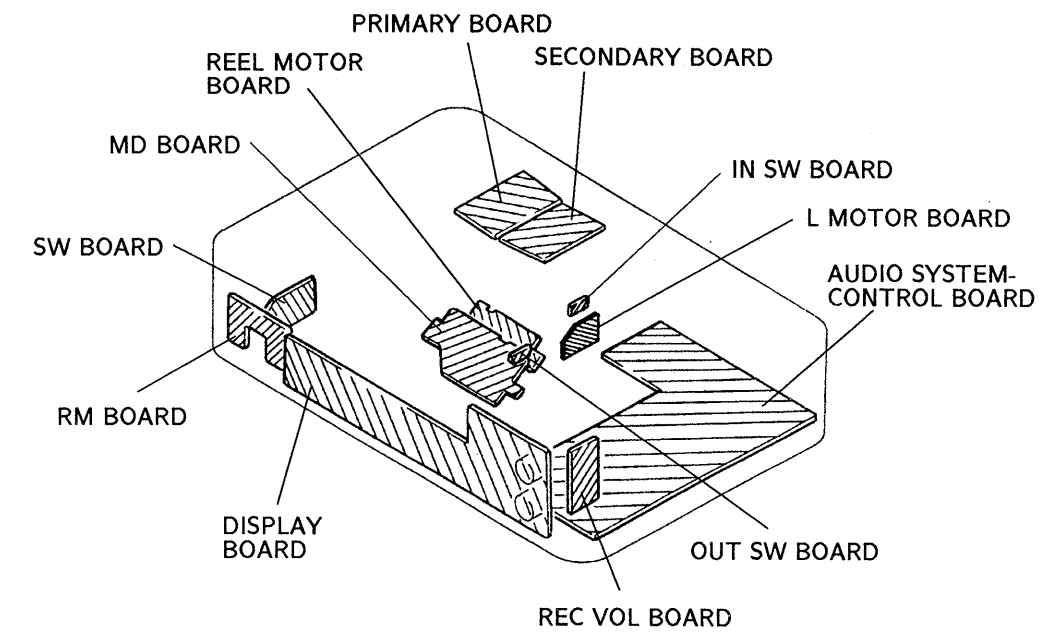
Adjustment Location

— Audio system control board (component side) —



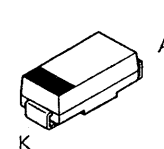


3-2. CIRCUIT BOARDS LOCATION

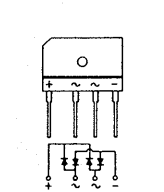


• SEMICONDUCTOR LEAD LAYOUTS

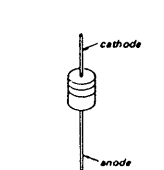
EC10QS-04
EC10DS2



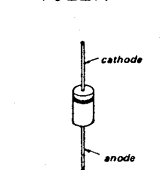
RBA-402



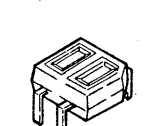
UZL-12M1
HZS-6A1L
HZS-7A1L



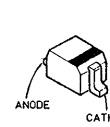
UZL-7H1
10E2N



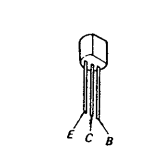
GP2S22B



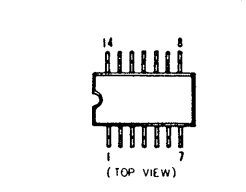
1SS355



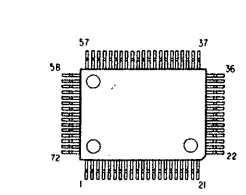
2SB1116A-L
2SC945-P



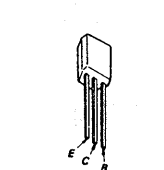
CD4066BCM
CD4069BCM-FL63



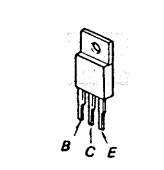
M50940-334FP
M50964-255FP



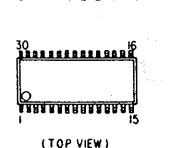
2SA1317-STU
2SA1344



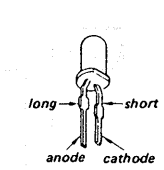
2SB1370-EF



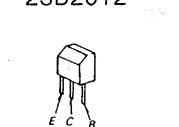
CXA1331M



SEL2510C-D



2SD2012



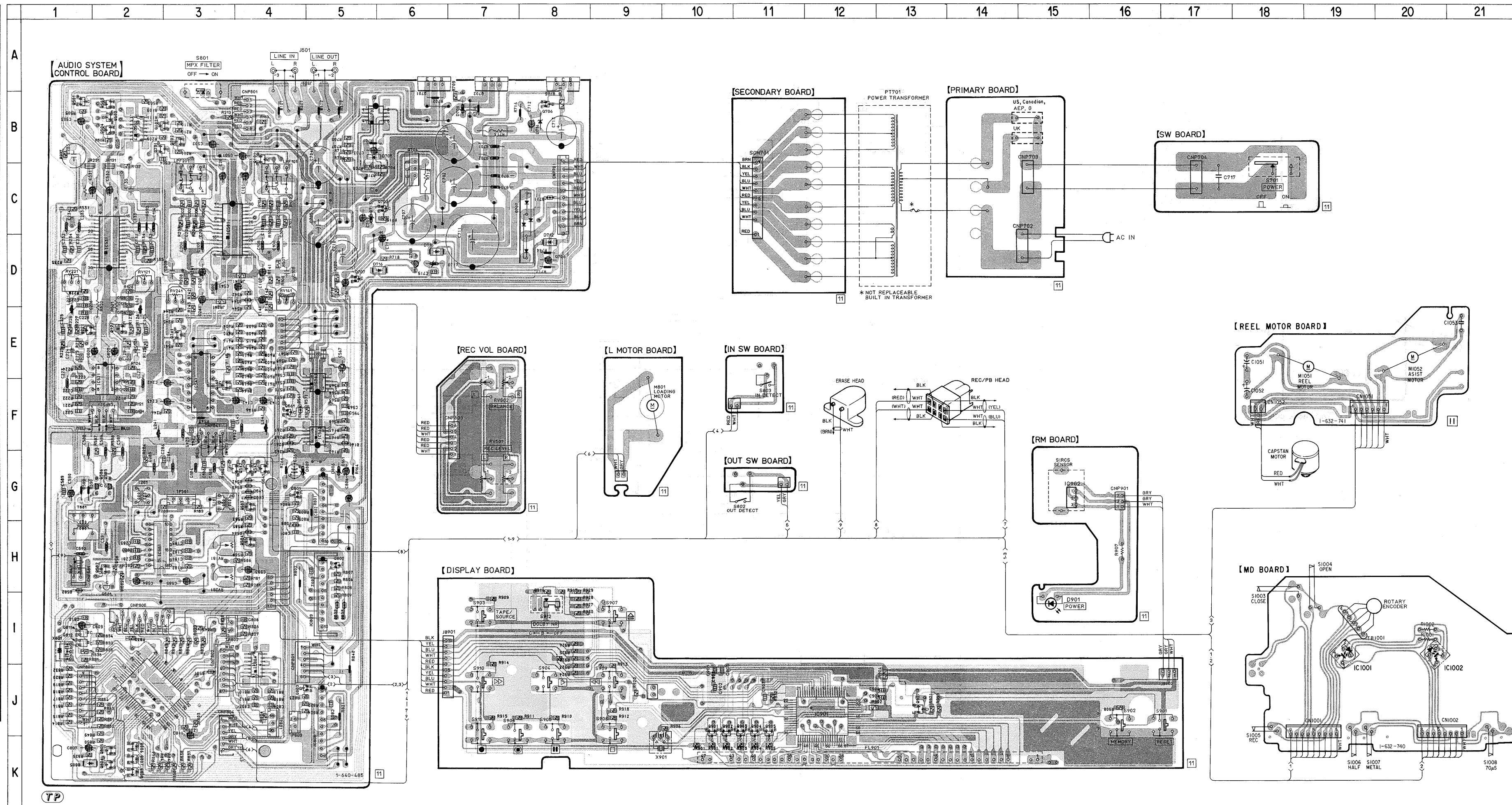
• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D161	F-5	Q101	B-4
D261	F-4	Q102	B-3
D501	J-3	Q121	E-2
D541	G-4	Q141	F-3
D542	G-4	Q201	B-3
D543	G-4	Q202	B-3
D544	D-4	Q221	E-1
D561	F-4	Q241	E-3
D582	H-1	Q501	B-1
D583	G-4	Q502	B-2
D584	H-4	Q503	B-2
D701	B-7	Q504	B-2
D702	B-7	Q541	G-4
D703	C-7	Q542	G-4
D704	C-7	Q543	G-4
D705	B-5	Q561	F-4
D706	B-7	Q581	H-2
D707	C-8	Q582	H-2
D711	C-8	Q583	G-4
D712	D-8	Q584	H-4
D713	C-5	Q585	G-2
D714	B-8	Q586	G-2
D715	D-6	Q701	A-6
D716	D-6	Q702	A-7
D717	D-6	Q703	C-6
D801	H-4	Q704	B-6
D802	I-5	Q705	A-8
D803	I-5	Q706	B-8
D805	K-1	Q707	D-5
D806	G-5	Q708	D-6
D807	G-5	Q801	G-4
D901	I-15	Q802	H-5
		Q803	J-5
		Q804	K-2
		Q805	K-2
IC1001	I-19	Q806	K-2
IC1002	I-20	Q807	K-2
IC501	C-3	Q808	K-2
IC502	B-2	Q811	I-1
IC521	F-2	Q812	I-1
IC531	D-2	Q812	I-1
IC541	F-3	Q901	J-10
IC561	F-5	Q902	J-10
IC562	F-5	Q903	J-11
IC581	H-3	Q904	J-11
		Q905	J-11
		Q907	J-13
IC701	B-5		
IC801	J-2		
IC802	G-5		
IC803	I-5		
IC804	I-4		
IC805	J-5		
IC901	J-12		
IC902	G-15		

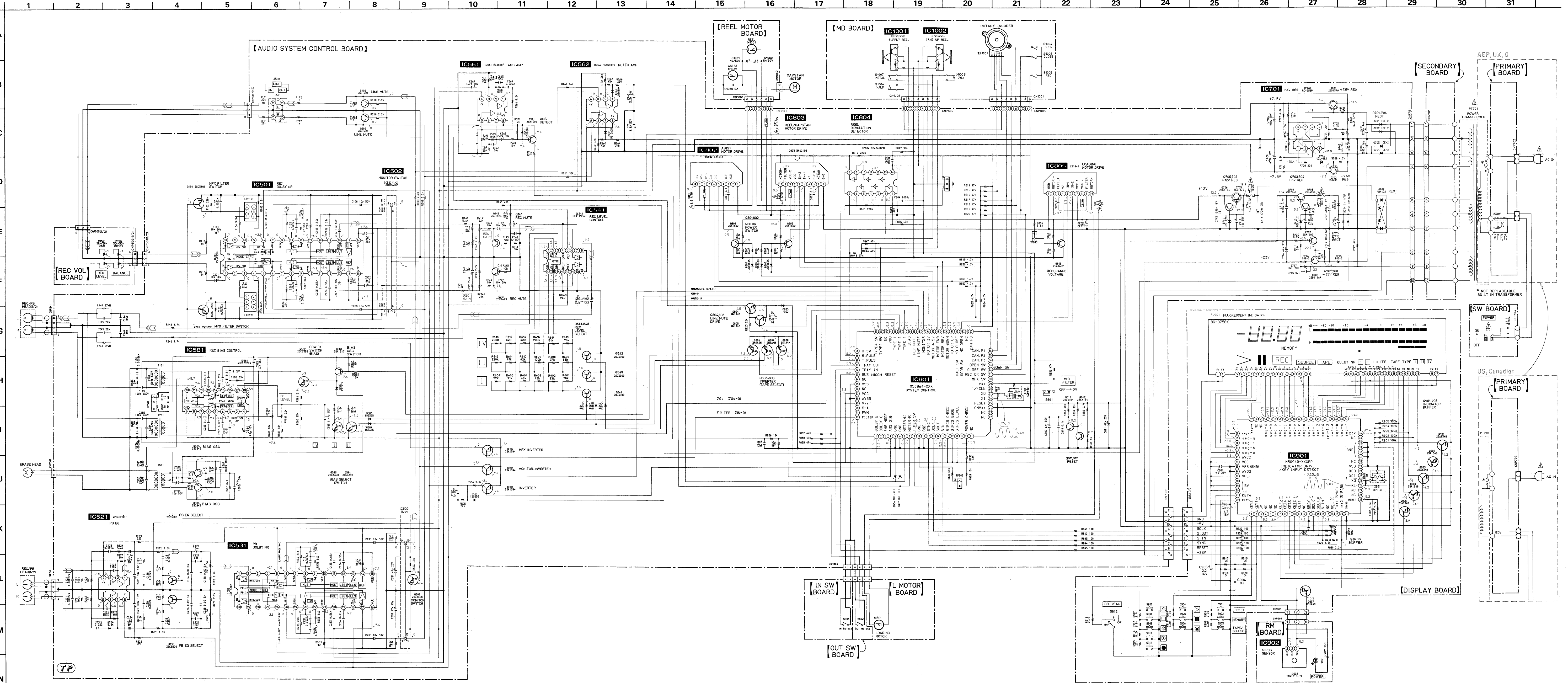
Note :

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- ▬ : indicates side identified with part number.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.
- : Through hole.

3-3. PRINTED WIRING BOARDS



34. SCHEMATIC DIAGRAM



A
B
C
D
E
F
G
H
I
J
K
L
M
N

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

SECTION 4

EXPLODED VIEWS



NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE)....(RED)

↑
Parts color

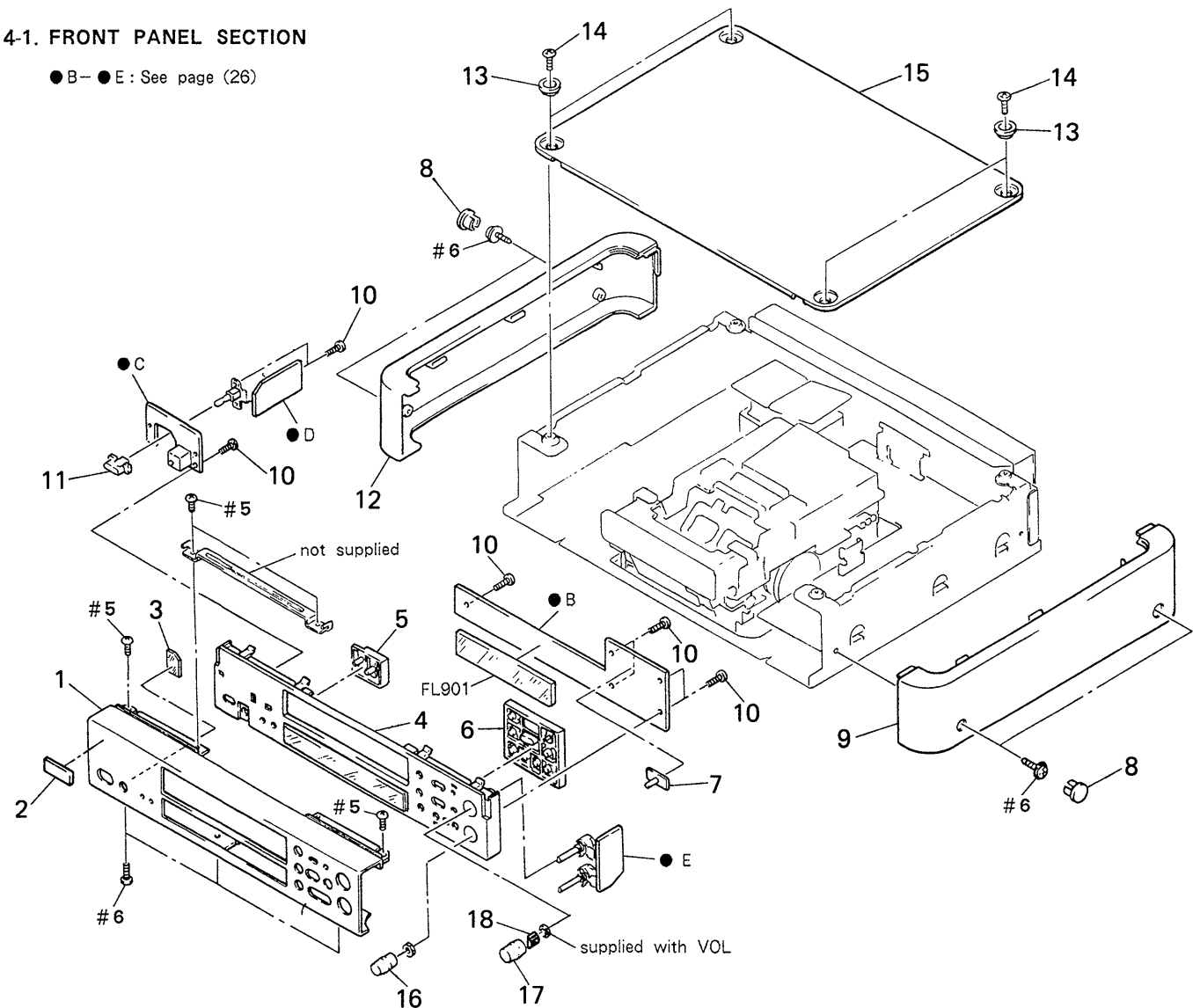
↑
Cabinet's color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

4-1. FRONT PANEL SECTION

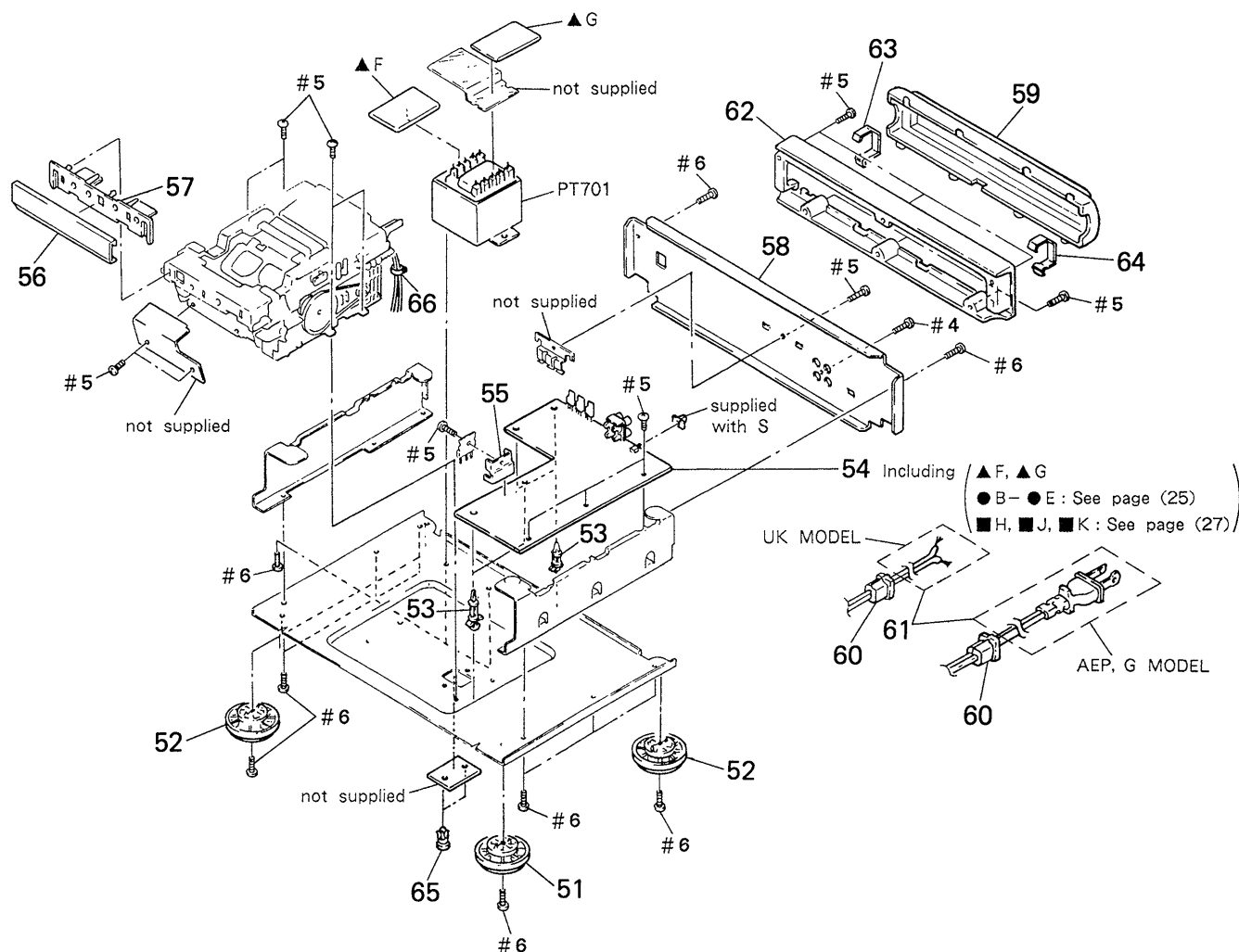
● B— ● E : See page (26)



Ref. No.	Part No.	Description	Remark
1	3-371-602-01	PANEL, FRONT	
2	4-946-905-01	ENBLEM (NO. 4. 5), SONY	
3	4-946-888-01	WINDOW (REMOTE CONTROL)	
4	X-3363-552-1	PANEL (BASE) ASSY	
5	3-371-599-01	BUTTON (COUNTER)	
6	3-371-600-01	BUTTON (BLOCK)	
7	3-371-595-01	KNOB (DOLBY)	
8	4-946-893-01	CAP (SIDE PANEL)	
9	4-946-891-01	PANEL (R), SIDE	
10	4-928-635-01	SCREW, +BV (2. 6X8) TAPPING	

Ref. No.	Part No.	Description	Remark
11	4-946-889-01	BUTTON (POWER)	
12	4-946-890-01	PANEL (L), SIDE	
13	4-928-025-11	ESCUTCHEON (TOP PLATE)	
14	3-721-187-01	SCREW (3X8)	
15	* 4-946-439-11	PLATE, TOP	
16	3-371-591-11	KNOB (ROUND 18)	
17	3-371-591-01	KNOB (ROUND 18)	
18	3-703-466-00	SPRING (6600)	
FL901	1-519-680-11	INDICATOR TUBE, FLUORESCENT	

4-2. REAR PANEL SECTION



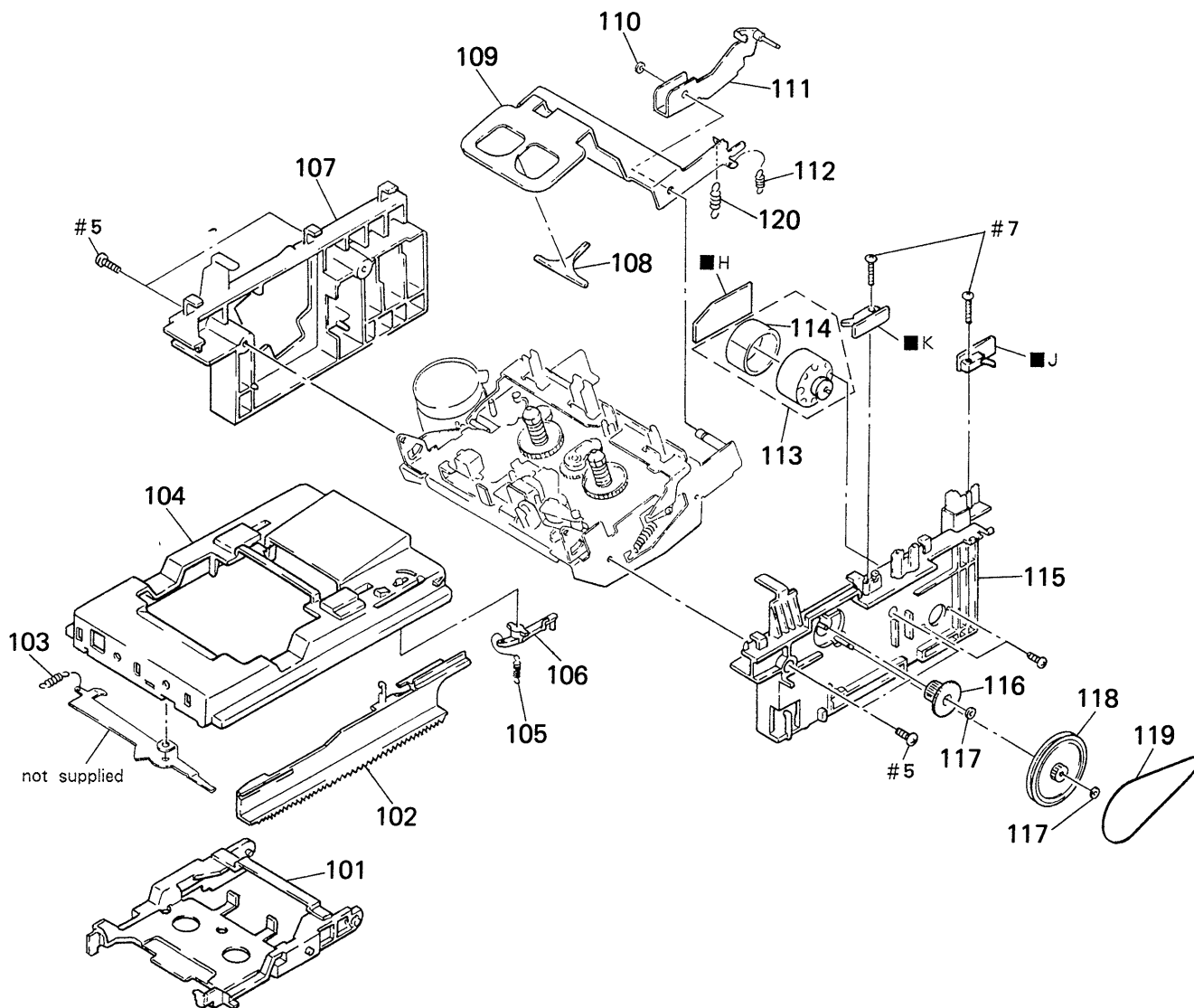
Note: The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
51	X-3363-549-1	FOOT ASSY	
52	X-3363-548-1	FOOT ASSY	
53	* 3-346-265-11	HOLDER, PC BOARD	
54	* A-2006-578-A	AUDIO SYSCON BOARD, COMPLETE	
55	* 3-356-925-01	HEAT SINK	
56	3-371-598-01	PANEL, LOADING	
57	3-371-597-01	ESCUTCHEON (LOADING PANEL)	
58	* 3-370-076-11	PANEL, BACK (UK)	
58	* 3-370-076-21	PANEL, BACK (AEP, G)	
58	* 3-370-076-31	PANEL, BACK (AEP)	
58	* 3-370-076-01	PANEL, BACK (US, Canadian)	

Ref.No.	Part No.	Description	Remark
59	4-946-444-01	COVER, REAR	
60	* 3-703-244-00	BUSHING (2104), CORD	
61	▲ 1-558-946-21	CORD, POWER (UK)	
61	▲ 1-575-651-21	CORD, POWER (AEP, G)	
61	▲ 1-590-836-11	CORD, POWER (US, Canadian)	
62	* 4-946-443-01	MOLD, REAR	
63	4-946-447-01	HOLDER (L)	
64	4-946-448-01	HOLDER (R)	
65	3-531-576-01	RIVET	
66	3-655-653-21	BAND (TAITON), BINDING	
PT701	▲ 1-450-631-11	TRANSFORMER, POWER (AEP, UK, G)	
PT701	▲ 1-450-630-11	TRANSFORMER, POWER (US, Canadian)	

4-3. MECHANISM SECTION (1)

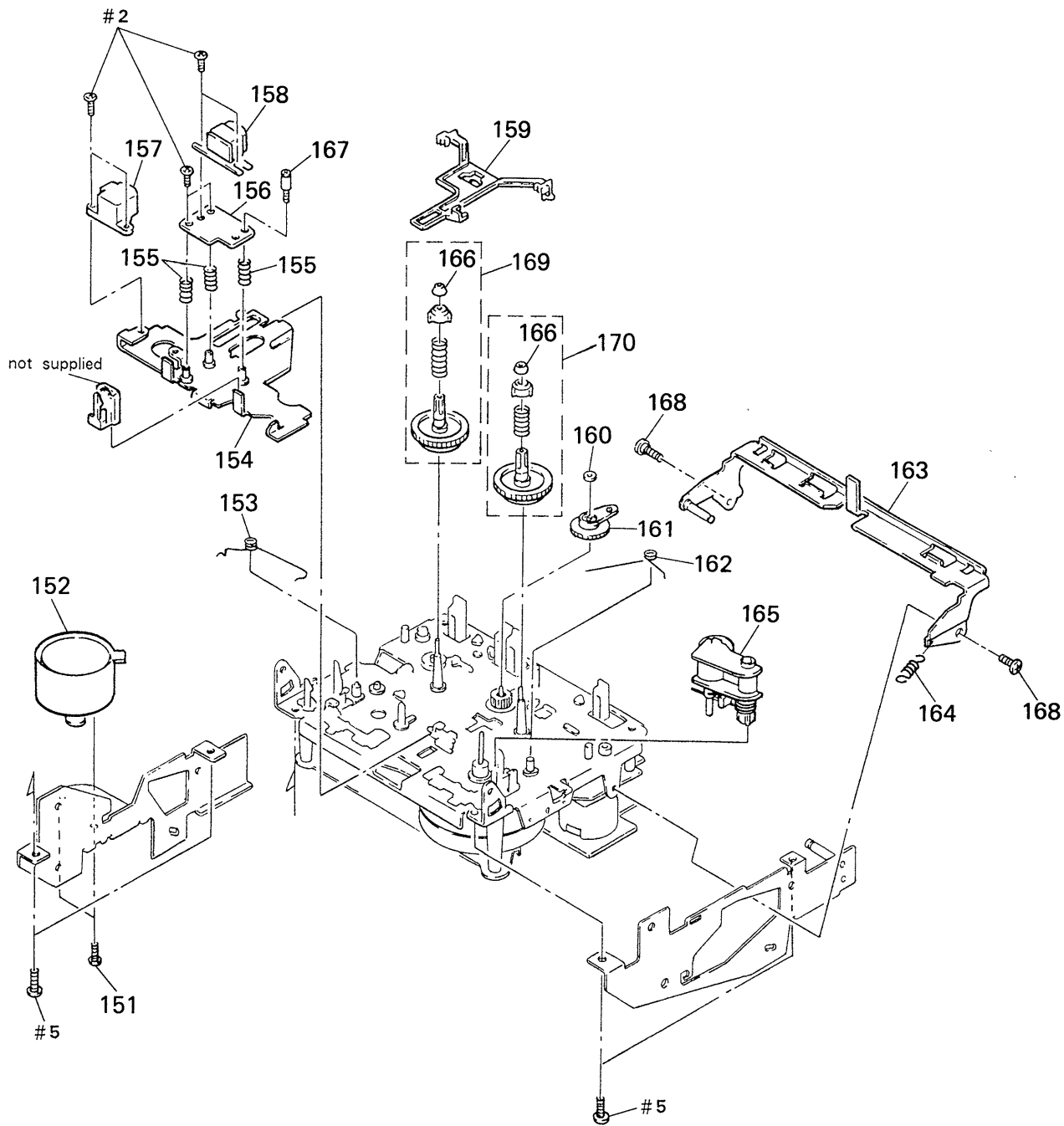
■ H, ■ J, ■ K : See page (26)



Ref. No.	Part No.	Description	Remark
101	3-371-624-01	RETAINER	
102	3-371-625-01	RACK	
103	3-371-628-01	SPRING (RETAINER), TENSION	
104	3-371-623-01	TRAY	
105	3-371-629-01	SPRING (LOCK LEVER), TENSION	
106	3-371-626-01	LEVER (LOCK)	
107	3-371-615-01	GUIDE (L)	
108	3-371-622-01	CUSHION (STABILIZER)	
109	* 3-371-621-01	LEVER (HALF RETAINER)	
110	3-696-510-01	WASHER (3), STOPPER	

Ref. No.	Part No.	Description	Remark
111	* X-3363-554-1	LEVER (LIMITER) ASSY	
112	3-371-619-01	SPRING (LIMITER), TENSION	
113	A-2003-936-A	MOTOR (LOADING) ASSY	
114	* 3-162-496-01	CORE, SHIELD	
115	X-3363-556-1	GUIDE (R) ASSY	
116	3-371-617-01	GEAR (DRIVING)	
117	3-669-465-00	WASHER (1.5), STOPPER	
118	3-371-616-01	PULLEY (MIDWAY)	
119	3-371-620-01	BELT (LOADING)	
120	3-371-618-01	SPRING (STABILIZER), TENSION	

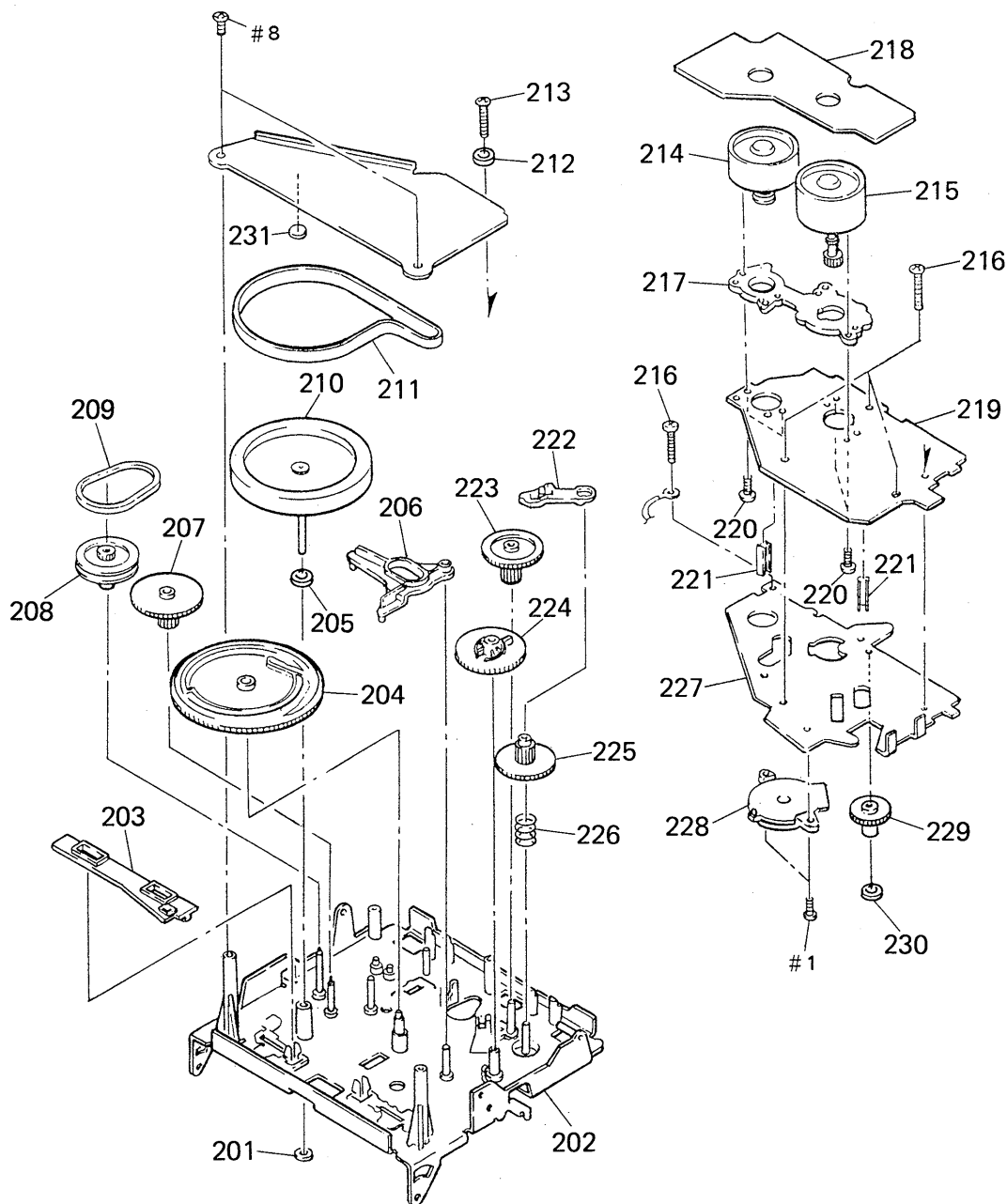
4-4. MECHANISM SECTION (2)



Ref. No.	Part No.	Description	Remark
151	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
152	X-3363-546-1	MOTOR (CAPSTAN V30) ASSY	
153	3-371-565-01	SPRING, TORSION	
154	X-3363-547-1	SLIDER (HEAD PCB V30) ASSY	
155	3-356-659-01	SPRING (RPH), COMPRESSION	
156	3-371-572-01	BRACKET (GUIDE R)	
157	1-543-535-11	HEAD, MAGNETIC (ERASE)	
158	1-543-733-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
159	3-356-614-01	SLIDER (BRAKE)	
160	3-669-465-11	WASHER (1.5), STOPPER	

Ref. No.	Part No.	Description	Remark
161	X-3356-641-1	LEVER (FR2) ASSY	
162	3-356-619-01	SPRING (B), TORSION	
163	* X-3363-542-1	LEVER (LIFTER) ASSY	
164	3-356-625-01	SPRING, TENSION	
165	X-3356-649-1	LEVER (PINCH LEVER T) ASSY	
166	3-356-618-01	CAP (REEL)	
167	3-371-630-01	SCREW (AZIMUTH), STEP	
168	3-371-631-01	SCREW (LIFTER), STEP	
169	X-3356-628-1	GEAR (S) ASSY	
170	X-3356-627-1	GEAR (T) ASSY	

4.5. MECHANISM SECTION (3)



Ref. No.	Part No.	Description	Remark
201	3-356-713-01	WASHER	
202	* X-3363-544-1	CHASSIS (V30) COMPLETE ASSY, MECH	
203	3-356-653-01	SLIDER (PAUSE)	
204	3-356-747-01	GEAR (MODE CAM C)	
205	3-356-705-01	WASHER (CAPSTAN)	
206	3-356-613-01	LEVER (MODE)	
207	3-356-606-01	GEAR (MODE)	
208	3-356-607-01	PULLEY (MODE)	
209	3-356-603-01	BELT (MODE)	
210	X-3356-642-1	FLYWHEEL (R FWD) ASSY	
211	3-371-571-01	BELT (CAPSTAN)	
212	* 3-356-718-01	SPACER (THRUST RETAINER R)	
213	3-356-707-01	SCREW (+PTWH 2X25)	
214	X-3356-604-1	MOTOR (ASSIST) ASSY	
215	X-3356-638-1	MOTOR (REEL R) ASSY	

Ref. No.	Part No.	Description	Remark
216	3-355-801-01	SCREW (BTP 2X18)	
217	* 3-356-628-01	SPACER (MOTOR)	
218	* 1-632-741-11	PC BOARD, REEL MOTOR	
219	* 1-632-740-11	PC BOARD, MD	
220	3-363-804-01	SCREW (+P 2.6X6.5)	
221	3-356-631-03	HOLDER (SENSOR)	
222	3-356-617-01	LEVER (SELECTION)	
223	3-356-703-01	GEAR (COMMUNICATION C)	
224	3-356-616-01	GEAR (LOADING CAM)	
225	3-356-609-01	GEAR (LOADING)	
226	3-356-605-01	SPRING, COMPRESSION	
227	* X-3356-602-1	BRACKET (MOTOR R) ASSY	
228	1-466-238-11	ENCODER, ROTARY	
229	3-356-702-01	GEAR (COMMUNICATION B)	
230	3-669-465-00	WASHER (1.5), STOPPER	
231	3-371-570-01	SPACER (THRUST RETAINER)	

SECTION 5

ELECTRICAL PARTS LIST

AUDIO SYSCON

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: μ , for example:
uA.....: μ A....., uPA.....: μ PA.....
uPB.....: μ PB....., uPC.....: μ PC.....
uPD.....: μ PD.....
- CAPACITORS**
uF: μ F
- COILS**
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	* A-2006-578-A	AUDIO SYSCON BOARD, COMPLETE		C144	1-163-257-91	CERAMIC CHIP 180PF	5% 50V
		*****		C145	1-136-935-11	FILM 22PF	5% 630V
	* 1-562-327-00	SOCKET, CONNECTOR 3P		C161	1-123-382-00	ELECT 3.3uF	20% 100V
	1-690-123-61	REED (WITH CONNECTOR) (2 CORE)		C181	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
	* 3-356-925-01	HEAT SINK		C182	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
	7-682-547-04	SCREW +BVTT 3X6 (S)					
		< CAPACITOR >		C183	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C101	1-126-059-11	ELECT 10uF	20% 50V	C184	1-136-803-11	FILM 560PF	5% 630V
C102	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C185	1-136-433-11	FILM 100PF	5% 630V
C103	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C186	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C104	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C201	1-126-059-11	ELECT 10uF	20% 50V
C105	1-137-195-91	FILM 0.56uF	5% 50V				
C106	1-136-171-00	FILM 0.33uF	5% 50V	C202	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V
C107	1-126-059-11	ELECT 10uF	20% 50V	C203	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V
C108	1-124-657-00	ELECT 10uF	20% 50V	C204	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V
C121	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	C205	1-137-195-91	FILM 0.56uF	5% 50V
C122	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C206	1-136-171-00	FILM 0.33uF	5% 50V
C123	1-163-157-00	FILM 0.022uF	5% 50V				
C124	1-124-657-00	ELECT 10uF	20% 50V	C207	1-126-059-11	ELECT 10uF	20% 50V
C125	1-163-986-00	CERAMIC CHIP 0.027uF	10% 25V	C208	1-124-657-00	ELECT 10uF	20% 50V
C126	1-164-693-11	CERAMIC CHIP 0.0018uF	5% 50V	C221	1-163-127-00	CERAMIC CHIP 270PF	5% 50V
C127	1-163-239-91	CERAMIC CHIP 33PF	5% 50V	C222	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C128	1-164-693-11	CERAMIC CHIP 0.0018uF	5% 50V	C223	1-163-157-00	FILM 0.022uF	5% 50V
C129	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V				
C131	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C224	1-124-657-00	ELECT 10uF	20% 50V
C132	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C225	1-163-986-00	CERAMIC CHIP 0.027uF	10% 25V
C133	1-137-195-91	FILM 0.56uF	5% 50V	C226	1-164-693-11	CERAMIC CHIP 0.0018uF	5% 50V
C134	1-136-171-00	FILM 0.33uF	5% 50V	C227	1-163-239-91	CERAMIC CHIP 33PF	5% 50V
C135	1-124-657-00	ELECT 10uF	20% 50V	C228	1-164-693-11	CERAMIC CHIP 0.0018uF	5% 50V
C141	1-126-044-11	ELECT 1uF	20% 50V				
C142	1-126-059-11	ELECT 10uF	20% 50V	C229	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C143	1-126-059-11	ELECT 10uF	20% 50V	C231	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V
				C232	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V
				C233	1-137-195-91	FILM 0.56uF	5% 50V
				C234	1-136-171-00	FILM 0.33uF	5% 50V
				C235	1-124-657-00	ELECT 10uF	20% 50V
				C241	1-126-044-11	ELECT 1uF	20% 50V
				C242	1-126-059-11	ELECT 10uF	20% 50V
				C243	1-126-059-11	ELECT 10uF	20% 50V
				C244	1-163-257-91	CERAMIC CHIP 180PF	5% 50V

AUDIO SYSCON

Ref. No.	Part No.	Description	Remark
C245	1-136-935-11	FILM 22PF 5%	630V
C261	1-123-382-00	ELECT 3.3uF 20%	100V
C281	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C282	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C283	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C284	1-136-803-11	FILM 560PF 5%	630V
C285	1-136-433-11	FILM 100PF 5%	630V
C286	1-163-135-00	CERAMIC CHIP 560PF 5%	50V
C501	1-126-022-11	ELECT 47uF 20%	25V
C502	1-126-022-11	ELECT 47uF 20%	25V
C503	1-124-903-11	ELECT 1uF 20%	50V
C521	1-124-994-11	ELECT 100uF 20%	10V
C522	1-124-994-11	ELECT 100uF 20%	10V
C531	1-126-022-11	ELECT 47uF 20%	25V
C532	1-126-022-11	ELECT 47uF 20%	25V
C541	1-124-903-11	ELECT 1uF 20%	50V
C542	1-126-233-11	ELECT 22uF 20%	50V
C563	1-163-245-11	CERAMIC CHIP 56PF 5%	50V
C564	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C566	1-163-245-11	CERAMIC CHIP 56PF 5%	50V
C567	1-124-927-11	ELECT 4.7uF 20%	100V
C568	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C583	1-124-902-00	ELECT 0.47uF 20%	50V
C584	1-126-022-11	ELECT 47uF 20%	25V
C585	1-126-022-11	ELECT 47uF 20%	25V
C586	1-136-253-11	FILM 0.0018uF 5%	100V
C587	1-136-253-11	FILM 0.0018uF 5%	100V
C588	1-136-233-11	FILM 0.0047uF 5%	100V
C589	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C590	1-124-907-11	ELECT 10uF 20%	50V
C591	1-107-045-00	MICA 3.9PF	500V
C592	1-136-558-11	FILM 0.0039uF 5%	630V
C701	1-124-556-11	ELECT 2200uF 20%	16V
C702	1-124-556-11	ELECT 2200uF 20%	16V
C703	1-124-994-11	ELECT 100uF 20%	10V
C704	1-124-994-11	ELECT 100uF 20%	10V
C705	1-124-997-11	ELECT 470uF 20%	10V
C706	1-124-907-11	ELECT 10uF 20%	50V
C707	1-126-936-11	ELECT 3300uF 20%	16V
C709	1-124-907-11	ELECT 10uF 20%	50V
C710	1-124-471-00	ELECT 1000uF 20%	6.3V
C711	1-124-564-11	ELECT 4700uF 20%	25V
C712	1-124-907-11	ELECT 10uF 20%	50V
C713	1-124-360-00	ELECT 1000uF 20%	16V
C714	1-124-122-11	ELECT 100uF 20%	50V
C715	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C716	1-124-910-11	ELECT 47uF 20%	50V
C717	1-161-744-00	CERAMIC 0.01uF	400V
C801	1-163-038-00	CERAMIC CHIP 0.1uF	25V

Ref. No.	Part No.	Description	Remark
C802	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C803	1-163-275-91	CERAMIC CHIP 0.001uF 5%	50V
C804	1-163-275-91	CERAMIC CHIP 0.001uF 5%	50V
C805	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C806	1-124-477-11	ELECT 47uF 20%	25V
C807	1-126-176-11	ELECT 220uF 20%	10V
C808	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C809	1-124-927-11	ELECT 4.7uF 20%	100V
C810	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C811	1-124-477-11	ELECT 47uF 20%	25V
C901	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C902	1-163-275-91	CERAMIC CHIP 0.001uF 5%	50V
C903	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C904	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C905	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C906	1-164-505-11	CERAMIC CHIP 2.2uF	16V

< CONNECTOR >

CNP501 *	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CNP503	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P
CNP521 *	1-560-062-00	PIN, CONNECTOR 4P
CNP541 *	1-560-062-00	PIN, CONNECTOR 4P
CNP581 *	1-560-060-00	PIN, CONNECTOR 2P
CNP701 *	1-564-513-11	PLUG, CONNECTOR 10P
CNP702 *	1-580-230-31	PIN, CONNECTOR (PC BOARD) 3P
CNP704	1-568-226-11	PIN, CONNECTOR 2P
CNP801 *	1-564-340-00	PIN, CONNECTOR 6P
CNP802 *	1-564-342-61	PIN, CONNECTOR 8P
CNP803 *	1-506-503-71	PIN, CONNECTOR 9P
CNP804 *	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CNP805	1-580-767-11	PIN, CONNECTOR (PC BOARD) 10P
CNP901	1-506-468-11	CONNECTOR 3P, MALE

< DIODE >

D161	8-719-988-62	DIODE 1SS355
D261	8-719-988-62	DIODE 1SS355
D501	8-719-988-62	DIODE 1SS355
D541	8-719-988-62	DIODE 1SS355
D542	8-719-988-62	DIODE 1SS355
D543	8-719-988-62	DIODE 1SS355
D544	8-719-988-62	DIODE 1SS355
D561	8-719-988-62	DIODE 1SS355
D582	8-719-988-62	DIODE 1SS355
D583	8-719-988-62	DIODE 1SS355
D584	8-719-988-62	DIODE 1SS355
D701	8-719-200-77	DIODE 10E2N
D702	8-719-200-77	DIODE 10E2N
D703	8-719-200-77	DIODE 10E2N
D704	8-719-200-77	DIODE 10E2N

AUDIO SYSCON

Ref. No.	Part No.	Description	Remark
D705	8-719-933-33	DIODE HZS6A1L	
D706	8-719-933-33	DIODE HZS6A1L	
D707	8-719-312-09	DIODE RBA-402	
D711	8-719-988-62	DIODE 1SS355	
D712	8-719-210-39	DIODE EC10QS-04	
D713	8-719-933-43	DIODE HZS7A1L	
D714	8-719-001-70	DIODE UZL-12M1	
D715	8-719-210-33	DIODE EC10DS2	
D716	8-719-210-33	DIODE EC10DS2	
D717	8-719-000-93	DIODE UZL-7H1	
D801	8-719-988-62	DIODE 1SS355	
D802	8-719-988-62	DIODE 1SS355	
D803	8-719-988-62	DIODE 1SS355	
D805	8-719-210-33	DIODE EC10DS2	
D806	8-719-933-33	DIODE HZS6A1L	
D807	8-719-933-33	DIODE HZS6A1L	
D901	8-719-301-44	DIODE SEL2410E-D	
< INDICATOR >			
FL901	1-519-680-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC501	8-752-037-90	IC CXA1331M	
IC502	8-759-516-47	IC CD4066BCM	
IC521	8-759-111-44	IC uPC4570C-1	
IC531	8-752-037-90	IC CXA1331M	
IC541	8-752-038-02	IC CXA1198AP	
IC561	8-759-981-95	IC RC4558S	
IC562	8-759-981-95	IC RC4558S	
IC581	8-759-106-56	IC uPC1297CA	
IC701	8-759-981-95	IC RC4558S	
IC801	8-759-637-18	IC M50964-255FP	
IC802	8-759-822-09	IC LB1641	
IC803	8-759-973-95	IC BA6219B	
IC804	8-759-516-49	IC CD4069BCM-FL63	
IC805	8-759-822-09	IC LB1641	
IC901	8-759-637-17	IC M50940-334FP	
IC902	8-741-100-48	IC SBX1610-59	
< JACK >			
J501	1-573-070-11	JACK, PIN 4P (LINE IN/OUT)	
< JUMPER >			
JR131	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR141	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR231	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR241	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR561	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref. No.	Part No.	Description	Remark
JR562	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR701	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR802	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR803	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR804	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR901	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR902	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR903	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR904	1-216-296-00	METAL CHIP 0 5% 1/8W	
< COIL >			
L121	1-410-778-11	INDUCTOR 18mH	
L141	1-410-780-11	INDUCTOR 27mH	
L221	1-410-778-11	INDUCTOR 18mH	
L241	1-410-780-11	INDUCTOR 27mH	
< FILTER >			
LPF101	1-236-147-11	FILTER, LOW PASS	
LPF201	1-236-147-11	FILTER, LOW PASS	
< TRANSISTOR >			
Q101	8-729-805-41	TRANSISTOR 2SC3398	
Q102	8-729-921-73	TRANSISTOR 2SD1781K-QR	
Q121	8-729-805-40	TRANSISTOR 2SC3900	
Q141	8-729-921-73	TRANSISTOR 2SD1781K-QR	
Q201	8-729-805-41	TRANSISTOR 2SC3398	
Q202	8-729-921-73	TRANSISTOR 2SD1781K-QR	
Q221	8-729-805-40	TRANSISTOR 2SC3900	
Q241	8-729-921-73	TRANSISTOR 2SD1781K-QR	
Q501	8-729-805-41	TRANSISTOR 2SC3398	
Q502	8-729-805-65	TRANSISTOR 2SA1344	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-805-65	TRANSISTOR 2SA1344	
Q541	8-729-805-45	TRANSISTOR 2SC3395	
Q542	8-729-805-45	TRANSISTOR 2SC3395	
Q543	8-729-805-45	TRANSISTOR 2SC3395	
Q561	8-729-602-36	TRANSISTOR 2SA1602	
Q581	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q582	8-729-805-41	TRANSISTOR 2SC3398	
Q583	8-729-805-41	TRANSISTOR 2SC3398	
Q584	8-729-805-41	TRANSISTOR 2SC3398	
Q585	8-729-194-57	TRANSISTOR 2SC945-P	
Q586	8-729-194-57	TRANSISTOR 2SC945-P	
Q701	8-729-924-90	TRANSISTOR 2SB1370-EF	
Q702	8-729-111-55	TRANSISTOR 2SD1312K	
Q703	8-729-602-21	TRANSISTOR 2SC4154	
Q704	8-729-111-55	TRANSISTOR 2SD1312K	
Q705	8-729-924-90	TRANSISTOR 2SB1370-EF	
Q706	8-729-602-21	TRANSISTOR 2SC4154	

AUDIO SYSCON

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q707	8-729-602-36	TRANSISTOR	2SA1602	R146	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
Q708	8-729-140-04	TRANSISTOR	2SB1116A-L	R161	1-216-086-00	METAL GLAZE	36K 5% 1/10W
Q801	8-729-602-36	TRANSISTOR	2SA1602	R162	1-216-086-00	METAL GLAZE	36K 5% 1/10W
Q802	8-729-602-36	TRANSISTOR	2SA1602	R163	1-216-088-00	METAL CHIP	43K 5% 1/10W
Q803	8-729-602-36	TRANSISTOR	2SA1602	R164	1-249-409-11	CARBON	220 5% 1/4W
Q804	8-729-805-65	TRANSISTOR	2SA1344	R181	1-216-079-00	METAL CHIP	18K 5% 1/10W
Q805	8-729-805-65	TRANSISTOR	2SA1344	R182	1-216-085-00	METAL CHIP	33K 5% 1/10W
Q806	8-729-805-65	TRANSISTOR	2SA1344	R183	1-216-001-00	METAL CHIP	10 5% 1/10W
Q807	8-729-805-65	TRANSISTOR	2SA1344	R184	1-216-101-00	METAL CHIP	150K 5% 1/10W
Q808	8-729-805-65	TRANSISTOR	2SA1344	R201	1-249-433-11	CARBON	22K 5% 1/4W
Q811	8-729-602-21	TRANSISTOR	2SC4154	R202	1-216-105-00	METAL CHIP	220K 5% 1/10W
Q812	8-729-602-21	TRANSISTOR	2SC4154	R204	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
Q901	8-729-805-65	TRANSISTOR	2SA1344	R205	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
Q902	8-729-805-65	TRANSISTOR	2SA1344	R206	1-216-082-00	METAL GLAZE	24K 5% 1/10W
Q903	8-729-805-65	TRANSISTOR	2SA1344	R207	1-216-043-00	METAL CHIP	560 5% 1/10W
Q904	8-729-805-65	TRANSISTOR	2SA1344	R208	1-216-097-00	METAL CHIP	100K 5% 1/10W
Q905	8-729-805-65	TRANSISTOR	2SA1344	R209	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q907	8-729-805-65	TRANSISTOR	2SA1344	R210	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
< RESISTOR >				R211	1-216-073-00	METAL CHIP	10K 5% 1/10W
R101	1-249-433-11	CARBON	22K 5% 1/4W	R212	1-249-417-11	CARBON	1K 5% 1/4W
R102	1-216-105-00	METAL CHIP	220K 5% 1/10W	R213	1-216-049-00	METAL CHIP	1K 5% 1/10W
R104	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R221	1-216-097-00	METAL CHIP	100K 5% 1/10W
R105	1-216-071-00	METAL CHIP	8.2K 5% 1/10W	R222	1-216-025-00	METAL CHIP	100 5% 1/10W
R106	1-216-082-00	METAL GLAZE	24K 5% 1/10W	R223	1-216-100-00	METAL GLAZE	130K 5% 1/10W
R107	1-216-043-00	METAL CHIP	560 5% 1/10W	R224	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R108	1-216-097-00	METAL CHIP	100K 5% 1/10W	R225	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R109	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R226	1-216-056-00	METAL GLAZE	2K 5% 1/10W
R110	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R227	1-216-105-00	METAL CHIP	220K 5% 1/10W
R111	1-216-073-00	METAL CHIP	10K 5% 1/10W	R228	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R112	1-249-417-11	CARBON	1K 5% 1/4W	R229	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R113	1-216-049-00	METAL CHIP	1K 5% 1/10W	R234	1-216-082-00	METAL GLAZE	24K 5% 1/10W
R121	1-216-097-00	METAL CHIP	100K 5% 1/10W	R235	1-216-043-00	METAL CHIP	560 5% 1/10W
R122	1-216-025-00	METAL CHIP	100 5% 1/10W	R237	1-216-097-00	METAL CHIP	100K 5% 1/10W
R123	1-216-100-00	METAL GLAZE	130K 5% 1/10W	R241	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R124	1-216-067-00	METAL CHIP	5.6K 5% 1/10W	R242	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W
R125	1-216-055-00	METAL CHIP	1.8K 5% 1/10W	R243	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R126	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R244	1-216-073-00	METAL CHIP	10K 5% 1/10W
R127	1-216-105-00	METAL CHIP	220K 5% 1/10W	R245	1-216-073-00	METAL CHIP	10K 5% 1/10W
R128	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R246	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R129	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R261	1-216-086-00	METAL GLAZE	36K 5% 1/10W
R134	1-216-082-00	METAL GLAZE	24K 5% 1/10W	R262	1-216-086-00	METAL GLAZE	36K 5% 1/10W
R135	1-216-043-00	METAL CHIP	560 5% 1/10W	R263	1-216-088-00	METAL CHIP	43K 5% 1/10W
R137	1-216-097-00	METAL CHIP	100K 5% 1/10W	R264	1-249-409-11	CARBON	220 5% 1/4W
R141	1-216-067-00	METAL CHIP	5.6K 5% 1/10W	R281	1-216-079-00	METAL CHIP	18K 5% 1/10W
R142	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W	R282	1-216-085-00	METAL CHIP	33K 5% 1/10W
R143	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R283	1-216-001-00	METAL CHIP	10 5% 1/10W
R144	1-216-073-00	METAL CHIP	10K 5% 1/10W	R284	1-216-101-00	METAL CHIP	150K 5% 1/10W
R145	1-216-073-00	METAL CHIP	10K 5% 1/10W	R501	1-216-049-00	METAL CHIP	1K 5% 1/10W
				R502	1-215-455-00	METAL	27K 1% 1/6W

AUDIO SYSCON

Ref. No.	Part No.	Description	Remark			
R503	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R504	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R505	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R521	1-247-704-11	CARBON	220	5%	1/4W	
R522	1-247-704-11	CARBON	220	5%	1/4W	
R531	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R532	1-215-455-00	METAL	27K	1%	1/6W	
R533	1-249-409-11	CARBON	220	5%	1/4W	
R541	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R542	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R543	1-215-454-00	METAL	24K	1%	1/6W	
R544	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R563	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R564	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R565	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R566	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R567	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R568	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R569	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R570	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R571	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R572	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R581	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R582	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R583	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R584	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R585	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R586	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R587	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R588	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R589	1-249-390-11	CARBON	5.6	5%	1/6W	
R590	1-249-390-11	CARBON	5.6	5%	1/6W	
R601	1-216-094-00	METAL GLAZE	75K	5%	1/10W	
R602	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R603	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R604	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R605	1-216-096-00	METAL GLAZE	91K	5%	1/10W	
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R607	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R608	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R609	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R610	1-216-092-00	METAL GLAZE	62K	5%	1/10W	
R611	1-216-096-00	METAL GLAZE	91K	5%	1/10W	
R612	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R613	1-216-094-00	METAL GLAZE	75K	5%	1/10W	
R614	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R615	1-216-104-00	METAL CHIP	200K	5%	1/10W	
R616	1-216-092-00	METAL GLAZE	62K	5%	1/10W	
R617	1-216-092-00	METAL GLAZE	62K	5%	1/10W	

Ref. No.	Part No.	Description	Remark			
R618	1-216-104-00	METAL CHIP	200K	5%	1/10W	
R701	1-249-426-11	CARBON	5.6K	5%	1/4W	
R702	1-249-425-11	CARBON	4.7K	5%	1/4W	
R703	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R704	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R706	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R707	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R708	1-249-425-11	CARBON	4.7K	5%	1/4W	
R709	1-216-033-00	METAL CHIP	220	5%	1/10W	
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R711	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R712	⚠ 1-219-137-11	FUSIBLE	0.33	10%	1/4W	
R713	⚠ 1-219-135-11	FUSIBLE	0.15	10%	1/4W	
R714	1-249-417-11	CARBON	1K	5%	1/4W	
R715	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R716	1-249-425-11	CARBON	4.7K	5%	1/4W	
R717	1-249-437-11	CARBON	47K	5%	1/4W	
R718	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R719	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R720	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R801	⚠ 1-212-952-00	FUSIBLE	5.6	5%	1/2W F	
R802	⚠ 1-212-954-11	FUSIBLE	6.8	5%	1/2W F	
R803	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R804	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R805	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R806	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R807	1-216-072-00	METAL CHIP	9.1K	5%	1/10W	
R808	1-216-068-00	METAL CHIP	6.2K	5%	1/10W	
R809	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R810	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R811	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R812	1-216-748-11	METAL CHIP	39K	1%	1/10W	
R813	1-216-748-11	METAL CHIP	39K	1%	1/10W	
R814	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R815	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R816	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R817	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R818	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R819	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R820	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R821	⚠ 1-212-952-00	FUSIBLE	5.6	5%	1/2W F	
R822	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R823	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R825	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R826	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R827	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R828	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R829	1-216-073-00	METAL CHIP	10K	5%	1/10W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

AUDIO SYSCON

Ref. No.	Part No.	Description	Remark		
R830	1-216-085-00	METAL CHIP	33K	5%	1/10W
R831	1-216-121-00	METAL CHIP	1M	5%	1/10W
R832	1-216-089-00	METAL CHIP	47K	5%	1/10W
R833	1-216-085-00	METAL CHIP	33K	5%	1/10W
R834	1-216-085-00	METAL CHIP	33K	5%	1/10W
R835	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R836	1-216-049-00	METAL CHIP	1K	5%	1/10W
R837	1-216-089-00	METAL CHIP	47K	5%	1/10W
R838	1-216-089-00	METAL CHIP	47K	5%	1/10W
R839	1-216-089-00	METAL CHIP	47K	5%	1/10W
R840	Δ 1-212-942-00	FUSIBLE	2.2	5%	1/2W F
R841	1-216-025-00	METAL CHIP	100	5%	1/10W
R842	1-216-025-00	METAL CHIP	100	5%	1/10W
R843	1-216-025-00	METAL CHIP	100	5%	1/10W
R844	1-216-025-00	METAL CHIP	100	5%	1/10W
R845	1-216-025-00	METAL CHIP	100	5%	1/10W
R846	1-216-089-00	METAL CHIP	47K	5%	1/10W
R847	1-216-089-00	METAL CHIP	47K	5%	1/10W
R848	1-216-089-00	METAL CHIP	47K	5%	1/10W
R849	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R850	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R851	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R852	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R853	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R854	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R855	1-216-089-00	METAL CHIP	47K	5%	1/10W
R856	1-216-062-00	METAL CHIP	3.6K	5%	1/10W
R901	1-216-097-00	METAL CHIP	100K	5%	1/10W
R902	1-216-097-00	METAL CHIP	100K	5%	1/10W
R903	1-216-097-00	METAL CHIP	100K	5%	1/10W
R904	1-216-097-00	METAL CHIP	100K	5%	1/10W
R905	1-216-097-00	METAL CHIP	100K	5%	1/10W
R906	1-216-121-00	METAL CHIP	1M	5%	1/10W
R907	1-249-408-11	CARBON	180	5%	1/4W
R908	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R909	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R910	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R911	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R912	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R913	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R914	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R915	1-216-083-00	METAL CHIP	27K	5%	1/10W
R916	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R917	1-216-073-00	METAL CHIP	10K	5%	1/10W
R918	1-216-073-00	METAL CHIP	10K	5%	1/10W
R919	1-216-073-00	METAL CHIP	10K	5%	1/10W
R920	1-216-073-00	METAL CHIP	10K	5%	1/10W
R921	1-216-085-00	METAL CHIP	33K	5%	1/10W
R922	1-216-025-00	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R923	1-216-025-00	METAL CHIP	100	5%	1/10W
R924	1-216-025-00	METAL CHIP	100	5%	1/10W
R925	1-216-025-00	METAL CHIP	100	5%	1/10W
R926	1-216-025-00	METAL CHIP	100	5%	1/10W
R927	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R928	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R929	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R930	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R932	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

< VARIABLE RESISTOR >

RV121	1-237-458-21	RES. ADJ. CARBON 5K (PB LEVEL)
RV141	1-237-460-11	RES. ADJ. CARBON 20K (REC GAIN)
RV181	1-238-601-11	RES. ADJ. CARBON 22K (BIAS)
RV221	1-237-458-21	RES. ADJ. CARBON 5K (PB LEVEL)
RV241	1-237-460-11	RES. ADJ. CARBON 20K (REC GAIN)
RV281	1-238-601-11	RES. ADJ. CARBON 22K (BIAS)
RV501	1-241-615-11	RES. VAR. CARBON 50K/50K (REC LEVEL)
RV502	1-241-616-11	RES. VAR. CARBON 50K/50K (BALANCE)

< SWITCH >

S701	Δ 1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY)
S801	1-572-859-11	SWITCH, SLIDE (MPX FILTER)
S802	1-572-143-11	SWITCH, SLIDE (OUT DETECT)
S803	1-572-143-11	SWITCH, SLIDE (IN DETECT)
S901	1-554-303-21	SWITCH, TACTILE (RESET)
S902	1-554-303-21	SWITCH, TACTILE (MEMORY)
S903	1-554-303-21	SWITCH, TACTILE (TAPE/SOURCE)
S904	1-554-303-21	SWITCH, TACTILE (▷)
S905	1-554-303-21	SWITCH, TACTILE (⏏)
S906	1-554-303-21	SWITCH, TACTILE (●)
S907	1-554-303-21	SWITCH, TACTILE (△)
S908	1-554-303-21	SWITCH, TACTILE (□)
S909	1-554-303-21	SWITCH, TACTILE (◀)
S910	1-554-303-21	SWITCH, TACTILE (▷)
S911	1-554-303-21	SWITCH, TACTILE (●)
S912	1-570-835-11	SWITCH, SLIDE (DOLBY NR)

< TRANSFORMER >

T181	1-433-344-11	TRANSFORMER, BIAS OSCILLATION
T281	1-433-344-11	TRANSFORMER, BIAS OSCILLATION
T581	1-433-343-11	TRANSFORMER, BIAS OSCILLATION

< TEST PIN >

TP581	* 1-564-506-11	PLUG, CONNECTOR 3P
TP801	* 1-564-506-11	PLUG, CONNECTOR 3P
TP802	* 1-564-505-11	PLUG, CONNECTOR 2P
TP803	* 1-564-505-11	PLUG, CONNECTOR 2P

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

AUDIO SYSCON MD REEL MOTOR

Ref. No.	Part No.	Description	Remark
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< VIBRATOR, CERAMIC >

X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X901	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

* 1-632-740-11 MD BOARD

3-356-631-01 HOLDER (SENSOR)

< CONNECTOR >

CN1001	1-506-615-11	PIN, CONNECTOR 9P	
CN1002	1-564-501-11	PIN, CONNECTOR 8P	

< IC >

IC1001	8-749-920-97	DIODE GP2S22B	
IC1002	8-749-920-97	DIODE GP2S22B	

< RESISTOR >

R1001	1-249-408-11	CARBON	180	5%	1/4W
R1002	1-249-408-11	CARBON	180	5%	1/4W

< SWITCH >

S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S1005	1-572-125-11	SWITCH, LEAF (REC)	
S1006	1-572-202-11	SWITCH, LEAF (HALF)	
S1007	1-572-125-11	SWITCH, LEAF (METAL)	
S1008	1-572-125-11	SWITCH, LEAF (70uS)	

< CONNECTOR >

TB1001 * 1-569-066-11 PIN, CONNECTOR 5P

* 1-632-741-11 REEL MOTOR BOARD

< CAPACITOR >

C1051	1-124-907-11	ELECT	10uF	20%	50V
C1052	1-124-907-11	ELECT	10uF	20%	50V
C1053	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

CN1051	* 1-564-499-11	PIN, CONNECTOR 6P	
CN1052	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	

Ref. No.	Part No.	Description	Remark
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MISCELLANEOUS

61	△ 1-558-946-21	CORD, POWER (UK)	
61	△ 1-575-651-21	CORD, POWER (AEP, G)	
61	△ 1-590-836-11	CORD, POWER (US, Canadian)	
157	1-543-535-11	HEAD, MAGNETIC (ERASE)	
158	1-543-733-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
228	1-466-238-11	ENCODER, ROTARY	
PT701	△ 1-450-631-11	TRANSFORMER, POWER (AEP, UK, G)	
PT701	△ 1-450-630-11	TRANSFORMER, POWER (US, Canadian)	

ACCESSORIES & PACKING MATERIALS

1-558-271-11 CORD, CONNECTION
1-559-533-11 CORD, CONNECTION

* 3-371-941-01 CUSHION
* 3-371-942-01 INDIVIDUAL CARTON
* 3-704-343-01 SHEET (STANDARD), PROTECTION

3-753-815-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,
SPANISH, PORTUGUESE) (AEP, UK)
3-753-815-41 MANUAL, INSTRUCTION (GERMAN, DUCH,
SWEDISH, ITALIAN) (AEP, G)

HARDWARE LIST

#1	7-621-255-35	SCREW +BVTT 2X5 (S)
#2	7-621-772-20	SCREW +B 2X5
#3	7-621-775-10	SCREW +B 2.6X4
#4	7-621-849-00	SCREW (BV/RING)
#5	7-682-547-04	SCREW +BVTT 3X6 (S)
#6	7-682-548-09	SCREW +BVTT 3X8 (S)
#7	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT
#8	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S
#9	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.